gard to the danger of sudden dilatation of the right heart during transfusion. Such an accident happened at the City and County Hospital in a case of carcinoma of the cecum with pronounced anemia. Preliminary to a short circuiting operation, transfusion was done by the direct method. Soon after the blood began to flow through the vessels, the patient was seized with mild convulsions, his respiration became embarrassed, his pupils dilated, and he died soon afterward in shock. I take this to be a case of death from sudden dilatation of the right heart.

Dr. Henry Horn: It is curious how little the value of this whole blood transfusion is known in connection with tonsil cases. It is curious also that I had four consecutive cases at St. Francis Hospital and each time the donor was the resident physician there—he has not only acted for me, but also in other cases. It seems to me that his blood has high agglutinating power because the results in some cases have been perfectly marvelous. The use of this method in tonsil hemorrhage is the simplest and by all odds the most practical.

Dr. B. Jablons: In connection with transfusion of infants, by utilizing the veins of the scalp it is possible to inject or withdraw blood with little difficulty.

I would like to ask Dr. Hurwitz whether it is possible to organize a bureau of donors on a practical basis, utilizing Landsteiner's classification, dividing donors into four groups.

I would also like to ask whether the hemolytic and agglutinating tests would not be affected by immersion in ice.

Dr. Hurwitz, closing discussion: In answer to Doctor Jablon's question as to whether or not hemolysis will occur at low temperatures, it is possible to state by analogy with the clinical condition, paroxysmal hemoglobinuria, that such may occur. As you well know, in the latter condition sensitization of the red corpuscles by the amboceptor takes place at low temperatures, whereas the action of the complement occurs at higher temperature. I have already referred to the presence of agglutinins in normal human bloods, and, as I stated, it is possible to divide individuals into four groups on this basis.

I was particularly interested in the discussion of the treatment of hemorrhagic diseases with whole blood, and rather surprised to learn that Doctor Birtch had not had success with the use of whole blood in hemophilia. The work of Libman and Ottenberg, to which Doctor Birtch referred, is rather insistent upon the value of transfusion in hemophilia. In fact, they recommend that every individual known to be hemophilic should have on hand a donor or donors whose blood has been found by preliminary tests to be compatible with theirs, so that in case of an attack of bleeding, one could resort to an immediate transfusion.

It is interesting to note how most physicians are paying less and less attention to the use of serum in this disease, and it is quite in keeping with what we are learning about the etiology of the various types of hemorrhagic disease. Especially in hemophilia, in which instance it has been shown with a fair degree of certainty that the defect in the blood is due to a deficiency in the circulating prothrombin, can we hope to supply the missing element in no other way than by the use of whole blood. Very recently a number of workers have also reported successful results with the use of whole blood in purpura hemorrhagica.

Dr. F. W. Birtch, closing discussion: In that case of hemorrhagic purpura the hemorrhage stopped after transfusion, but it recurred in about three weeks and had to be transfused again. I was only disappointed that it did not cure it. But it stopped the hemorrhage at the time.

Dr. Saxton Pope, closing discussion: Dr. Reynolds asked about urticaria. Dr. Morrow has used blood injections a great deal and has found them almost specific. This case verged upon angioneurotic edema and was permanently relieved by one or two injections of whole blood intravenously.

As to what form of transfusion you use, I think there is a choice. Medical men speak of the Lindeman method, which is the use of the intravenous cannula with record syringes used in succession.

The Lewishon method depends on the use of citrate of soda in two tenths per cent.—added to whole blood. The mixture does not coagulate and may be delivered intravenously by means of a hypodermiclysis outfit.

When you want a large volume of blood, you had better give a direct transfusion with the cannula method.

In typhoid possibly there is a chance for transfusion by the Kimpton-Brown tube, although this scheme is capable of damage, where positive pressure is used, through the introduction of clots into the circulation. In transfusing from dogs the usual clotting time is less than in human blood—it clots in a Kimpton tube in less than three minutes, giving one a very short time for collection and administration of the blood.

Where you wish to restore the volume of blood a direct transfusion is undoubtedly best. It is a simple thing to tell how much blood is passing over. If the cannula is connected with the radial artery and the blood run into a graduate glass, it usually runs one-half ounce in ten seconds. The vein pressure is 7 mm., the artery pressure 140, so that there is little deduction to be made for differences in pressure. In ten minutes you are running at least a pint of blood.

We transfuse our patients ten to twenty minutes, sometimes seven minutes in children. The donor usually will faint in fifteen minutes. The radial artery in the donor after such an operation, usually is restored and apparently is as good as ever after six weeks.

The surgeon will always want to use the direct method; the internist will favor the syringe. Take your choice and use discretion.

BOOK REVIEWS

Diseases of the Skin. By Henry H. Hazen, A. B., M. D. Published by C. V. Mosby Company, St. Louis, 1915.

Hazen's book on Diseases of the Skin is well worth reading. The illustrations alone are enough to make the book of great value. In fact much can be learned from a study of the pictures without the print. It is not a difficult book to read as the print is large and in no place is any account long enough to be irksome, yet the subjects are all carefully covered. One could wish that even a little more might have been given on treatment, but to cover everything necessary to be considered in the treatment of skin diseases, it would require a book devoted to this subject alone. Written as the book is by a man of such excellent training and of such extensive experience both in private practice and in the clinics it is a treatise that one who is interested in skin diseases would not regret to own. G. D. C.

Text Book of Materia Medica for Nurses. Compiled by Lavinia L. Dock. Fifth Edition. Published by G. P. Putnam's Sons, New York and London, 1915. Price, $1.50.

A well arranged, concise and convenient book for reference and study by the class of readers for whom it is written. The brevity of the descriptions of the drugs and their actions is especially to be commended, and the introductory notes